

JAN 9 1974

State of Montana
Office of The Lieutenant Governor
Helena 59601

BILL CHRISTIANSEN
LIEUTENANT GOVERNOR



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January 7, 1974

ENERGY STATUS REPORT

The Montana Farm Bureau is organizing an energy status reporting network among its members. Initially, the network will comprise reporting contacts in nine Montana counties, with potential contacts in 38 counties. Reports of energy sources available to Bureau members will be compiled monthly and relayed to this office. The first Montana Farm Bureau report is expected late this month.

The creation of similar reporting networks would be of great benefit to those whose livelihoods are dependent upon a ready supply of fuel or other energy sources. Given such a network, participating members should be able to plan ahead to somewhat minimize the impacts of short energy supplies. The Montana Energy Advisory Council encourages the creation of similar networks among other organizations of energy consumers, and requests that information so gathered be shared with the public.

Agricultural and other major use segments indicate a general belt-tightening among petroleum product consumers. Our sources indicate that while petroleum products are more scarce they are adequate, at present. Justifiable fears have been expressed at the prospect of further curtailment, however.

The response of Governor Judge's Fuel Conservation Ad Hoc Advisory Committee to his request for energy conservation suggestions has been encouraging. Suggestions have been received from representatives of major energy consumption sectors. These suggestions will be available for reference in the Governor's Office and in the office of the State Fuel Allocation Officer, C. L. Gilbertson, in the National Guard Armory.

Middle Distillate Program

A total of 241 requests for middle distillate fuels were received by the allocation office during the month of December. A total of 303,486 gallons of middle distillate fuels were allocated, of which 288,820 gallons were diesel fuel and 14,666 gallons were heating oil. Total middle distillate fuel allocation requests

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were up 207% over the previous month. Increases in allocations of diesel fuel and heating oil over the November totals were 206% and 229%, respectively.

Fifty-five percent of the diesel fuel allocated was requested by trucking, logging, construction and petroleum dealers. Other top consumption sectors were agriculture at 16% of total diesel fuels and commercial endeavors at 9%. The vast majority of heating oil allocations were for residential fuel.

To date this month, the allocations office has received over 100 requests for middle distillate fuels. The majority of these requests have been for heating oil, although the amount of diesel fuel for which allocation requests have been made has already reached 57% of the December total.

General Comments

Petroleum Products

The Federal Register published the proposed Federal Energy Office's mandatory regulations for petroleum products on December 17, 1972, and expanded this version in the Register for January 2, 1974. The proposed regulations will apply to crude oil, propane and butane, motor gasoline, middle distillate fuels, aviation fuels and residual fuel oils.

Proposed allocation amounts are as follows:

Propane-Butane (base period is calendar year 1973)

- A) Department of Defense - 100% of current requirements.
- B) Agricultural production - 100% of current requirements.
- C) Medical and nursing - 100% of current requirements.
- D) Energy production - 100% of current requirements.
- E) Public transportation - 100% of current requirements.
- F) Emergency services - 100% of base period.
- G) Residential - 95% of current requirement, adjusted for degree days.
- H) Schools - 90% of base period.

Motor Gasoline (base period is calendar year 1972)

- A) Agricultural production - 100% of current requirements.
- B) Gas production - 95% of base period (to be readjusted quarterly).
- C) Emergency services - 100% of current requirements.

- D) Energy production - 100% of current requirements.
- E) Public transportation - 100% of current requirements.
- F) Other uses - no more than 90% of base period.
- G) Other business - 100% of base period.

A review of monthly mandatory reporting forms submitted by petroleum producers to the Allocation Officer indicates that the allocation fractions of middle distillate fuels to be made available to Montana distribution supply points, during the month of January, are lower than previous amounts. These fractions range from 78% to 92%. Consequently, Montanans should expect somewhat less than 92% of fuel amounts available in January last year.

Information that the Union Oil Company will terminate all distribution activities in Montana is premature. Lowell Torkelson, Union Oil Company spokesman, has informed this office that a second Union Oil bulk plant, located in Sidney, will be closed January 25. The Miles City Union Oil bulk plant was closed in December, 1973. Mr. Torkelson has stated that Union Oil is arranging alternative supply sources for the nine Sidney customers served by their plant. In addition, contracts with five wholesale jobbers will not be renewed. Torkelson added that the 25 or 26 commissioned Union Oil distributors in Montana will continue to receive supplies from Union.

Natural Gas

No further details have been received by this office pertaining to new natural gas discoveries in Montana. The Department of Natural Resources and Conservation notes that the new discovery reported in the Rapelje area appears to be minor. Extensive exploration for natural gas is continuing in the Tiger Ridge area of Montana, though no major new finds have been announced.

The Montana Power Company reports that Alberta's natural gas export authorizations will expire May 14, 1974. These authorizations apply to approximately 30% of the natural gas MPC imports (total MPC dependence upon Canadian natural gas is 80%). If the authorizations are not renewed, "a short-term dislocation of gas supply could result."

Electricity

Encouraging news is reported by Ron Wilkerson, Kalispell Manager of the Bonneville Power Administration. The Bonneville Power Administration has noted a system-wide reduction in actual consumption of 8 to 9 percent from demand estimates. Of the almost 9% reduction, two-thirds, or 6%, is attributed to voluntary conservation efforts.

The recent cold weather presents a short-term but serious problem although increases in demand for electricity have not been as high as expected. The increased demand has been on the order of 600 megawatts (in the BPA delivery section), system-wide. Wilkerson has suggested that part of the deficit in expected demand is due to clear days -- bright sunlight does make a difference in home heating, especially if drapes and shades are opened.

Secondary power sales, which were curtailed January 2, are expected to be restored this week.

As noted last month, all oil-fired generating plants in the Northwest power pool service area have been shut down. This is still the case. The Hanford nuclear plant, down for refueling, is expected to be back on line this week.

Recent snowpack in the Northwest may eliminate the 6.9 billion kilowatt hour deficit anticipated by the BPA system. Snowpack information, collected by the Soil Conservation Service, looks very favorable. An official report on this data will be released by BPA next week.

Conservation

The energy conservation efforts of Montana government, ordered by Governor Judge, have begun to bear fruit. The Montana Department of Administration has reported an 8.7% reduction in government use of electricity and a 28.4% reduction in the use of natural gas. Some of the reduction may be attributed to warmer temperatures in November 1973, compared to November 1972. In late December 1973, additional steps were taken to reduce lighting levels in the Capitol Building. Savings due to this action will be noted in future reports.

"Surplus" power in the Northwest Power Pool of BPA is being switched to meet needs in the California utilities system. BPA spokesman Ron Wilkerson estimates that this power is saving 100,000 barrels of oil per day.

A report of an American Automobile Association survey indicated that 80% of the commuters on a Virginia highway leading to Washington were voluntarily holding their speed to 50MPH. Only 4% of the motorists were driving at speed in excess of 60MPH.

Interesting developments have been noted in Eastern electric utilities systems. The Potomac Electric Power Company has been allowed to charge increasingly higher rates to customers using more than 400 kilowatt hours per month. The firm has not been allowed to raise

rates to customers using less than this amount. In addition, utilities in Detroit and Chicago also have been shifting the cost burden of heavy consumption of electricity from residential users to large industrial concerns.

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Bill - CHRISTIANSEN
LIEUTENANT GOVERNOR

February 4, 1974

MONTANA ENERGY STATUS REPORT

Energy Status Report Forms received from our informants indicate greater apprehension about the availability of all petroleum fuels. Agricultural organizations have indicated spot shortages of heating oil, diesel fuel and gasoline. One source has informed us that fuel is available, if the buyer can afford it -- prices for No. 2 Diesel have increased 300% in some areas. (Any inquiries about prices of petroleum products should be directed to the local office of the Internal Revenue Service.) Most respondents reporting fear shortages in the near future.

According to the Weekly Energy Report, published in Washington, D.C., Canadian sources of oil and gas may dry up in the near future. Donald Macdonald, Canada's Minister of Energy, Mines and Minerals, reports a growing groundswell of opinion in Canada to limit oil exports to the United States and to eliminate natural gas exports entirely as contracts expire. Canadian Premier Trudeau met recently with the Premiers of Canada's ten provinces to discuss Canadian energy strategy and energy policy. Rumor has it that Alberta will renew natural gas contracts only if export quantities still assure a 50 year domestic supply.

Middle Distillate Program

A total of 243 requests for middle distillate fuels were received in January. Of the total of 352,000 gallons allocated, 91%, or 336,050 gallons, were diesel fuel. The remainder, 15,950 gallons, was heating oil. Increases in the allocation of diesel fuel and heating oil over December totals were up 9% each.

Ninety-one percent of the diesel fuel allocated was requested by the trucking, logging, county government, construction, agriculture and commercial consumptive sectors.

General CommentsPetroleum Products and Natural Gas

Herb Hadley of the Montana Oil and Gas Conservation Commission reports that, while the number of wells and drilling footage was down

in 1973, production was up and the number of successful wells increased.

Total wells drilled in 1973 were 716, compared to 724 in 1972 -- with 1973 noting 42 successful wells compared to 26 successful wells in 1972. Total drilling footage in 1973 was 1,831,506, compared to 2,300,075 in 1972. The difference is attributed to increased exploration for "shallow gas" in the Tiger Ridge and Bowdoin Dome areas. Oil production was an estimated 34,600,000 barrels in 1973, compared to 33,904,139 barrels in 1972. The increase in production was attributed to increased efficiency by operators and an increase in secondary recovery operations, particularly in the Bell Creek and Cut Bank fields. The trend in increased production is expected to continue through 1974. Hadley noted that the 2% increase in production is unusual in that production has been dropping about 3-6% per year due to lower pressures in producing wells. Interest in secondary recovery efforts and increased efficiency is due to an approximate threefold increase in the price of the product. Graham Keeler, of the same office, reports that natural gas withdrawals from Montana wells increased from 5,404,890 MCF in November, 1973, to 6,213,409 MCF in December. The increase was attributed to the late December cold snap.

Recent Canadian tax increases bringing the product value to a total of \$10.28 per barrel of oil have prompted active exploration of Montana oil fields by Canadian producers. Canadian oil tax jumped an additional \$4.20 as of February 1, 1974.

Electricity

The recent Bonneville Power Administration reports indicate the deficiency in their reservoir storage system has been eliminated due to favorable precipitation. According to a BPA news release, "no further energy shortage is expected in the Pacific Northwest through early summer, and deliveries of surplus hydro energy to markets outside the region will begin January 27."

The Montana Energy Advisory Council wishes to caution consumers against resumption of wasteful energy consumption habits, however, in the interests of prevention of future electric power shortages.

Miscellaneous

Nationally, the gas industry is reported to have allocated some \$2.3 billion to gas research and development efforts, according to the 1/21/74 Weekly Energy Report. The American Gas Association has recommended that \$1.75 billion of that sum be dedicated to research in development of synthetic natural gas technology. Of this \$1.75 billion, \$1.32 has been earmarked for high Btu gasification of coal. The AGA requested government aid in their program, calling for a removal of "the tax and financing and other regulatory barriers to getting . . . projects moving."

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STATE DOCUMENTS

3-7-74

State of Montana
Office of The Lieutenant Governor
Helena 59601

BILL CHRISTIANSEN
LIEUTENANT GOVERNOR

March 5, 1974

ENERGY STATUS REPORT

Responses to our Energy Status Survey, with one exception, were from petroleum product consumers. Consensus indicates that fuel supplies are adequate to date. Most respondents indicated they expect some shortages late this year. Several that answered the survey suggested an expanded public campaign to encourage energy conservation through modifications in individual and commercial energy consumption habits (e.g. planning automotive trips more effectively, doing less recreational driving, curtailing evening business hours).

Gasoline, diesel, and propane supplies are described as adequate to tight by the Montana Department of Agriculture. No curtailment of necessary farm work has yet been reported, although some counties have reported that diesel supplies are very limited. The Department also reports that some fuel distributors are borrowing on next month's allocation.

Middle Distillate Program

Fuel allocation requests during the months of February dropped to 173, compared to 243 for the month of January. The Montana Fuel Allocation Office attributes the reduction to the truckers strike of last month. A total of 320,220 gallons of middle distillate fuels were allocated (down from 352,000 gallons in January), of which 179,400 gallons (56%) were diesel fuel. Diesel allocations were down 47% from January. Gasoline allocations (135,560 gallons) accounted for 42% of total allocated fuels. The largest consumer sectors requesting allocation were fuel

dealers, accounting for 82% of the diesel allocations and 61% of the gasoline allocations. The second largest consumer sector was the commercial business section, accounting for 8% of diesel and 13% of gasoline allocation. The logging industry requests amounted to about 2% of the diesel fuel and 8% of the gasoline allocations. Heating oil and propane requests in February amounted to only 2% of total fuels allocated.

GENERAL COMMENTS

Petroleum Products and Natural Gas

Contacts within the Oil and Gas Conservation Division of the Department of Natural Resources and Conservation have reported that drilling and exploration activities in Montana still are being hindered by uncertainties concerning availability of well casings and other steel materials.

Oil operators have been displaying increasing interest in secondary recovery efforts at producing fields. The Oil and Gas Division reports that 75% of current oil production in Montana is from fields at which at least some secondary recovery efforts are underway. In most cases, secondary recovery efforts utilize water flooding of wells from subsurface aquifers.

Miscellaneous

Montana educators are encouraged to read the January, 1974 issue (volume 93, no. 1) of Nation's Schools. An excellent discussion of energy conservation practices is presented therein.

Energy conservation bumper stickers are available from the Lt. Governor's Office free of charge. Available are:

Join Watt-Watchers: Save Energy
Save Gas, Don't Pass
Energy Crisis? No Fueling!!
When Not In Use, Turn Off The Juice
Conserve Energy--For Crisis Sake.

According to the February 4 issue of Weekly Energy Report (Volume 2, No. 5), a former high level official of the Department of the Interior has claimed that the United States could become energy self-sufficient before 1980. S. Fred Singer, now a professor of Environmental Sciences at the University of Virginia, stated that the nation can become energy self-sufficient without a contribution from synthetic crude oil derived from shale and coal with "perhaps a little help from Canadian imports." Singer warned against pursuing high-cost energy resources, such as oil shale and coal liquification, on a full-scale basis. Singer fears that such an approach will lock the United States into expanded use of high-cost energy resources. In drawing his conclusions, Singer referred to the publication, Low Growth/Demand Scenario to be released by the Ford Foundation Energy Policy Project. That publication indicates that the United States energy growth is slowing to 1.6% per year and transportation energy growth slowing to 0.3% per year. Singer also noted that rising prices will bring production from marginal reserves, and will stimulate exploration activities.

APR 4 1974

BILL CHRISTIANSEN
LIEUTENANT GOVERNOR

April 1, 1974

MONTANA ENERGY STATUS REPORT

The response of citizens to the energy crisis has been most encouraging. Considerable reductions in energy consumption have been noted nationwide and within Montana. A continuation of this trend is essential if we are to avoid more severe, and more pervasive energy shortages in the future.

Recent news releases indicating the energy crisis has been broken and suggesting that Americans may safely resume their former energy consumption habits are, at best, misleading. Due to our concern that Montanans may return to former patterns of energy consumption, we will devote much of this issue to excerpts from a speech presented by Lieutenant Governor Christiansen at a series of energy seminars last week.

These excerpts are as follows:

"To sulk about events in history is self-defeating. To learn from them commendable. Be comforted by the fact that if the annual doubling of our dependence of foreign oil had continued for a year or two, or more, and then the spigot had been turned off, a chaotic situation would have resulted.

For my personal purpose, the energy history lesson I have learned is 'you cannot continue to supply infinite energy demands from finite energy sources.'

Motivation by pocketbook undoubtedly forces the quickest reaction. Let me assure you the era of cheap energy is over. Only by the cutting of your personal energy requirements by 20 percent, or more, will you avoid more than doubling your energy bills within two years. Doubling is almost inevitable. Holding them to an only two-fold increase will be strictly up to you and your way of life.

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April 1, 1974
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According to the Bureau of Labor Statistics, who compile a cost of living index, gas and motor oil are up 30.9% when comparing February 1974 with February 1973. In a like manner, fuel and coal are up 58.8% over the same period.

It is merely a matter of semantics whether we refer to the current energy situation as a 'dilemma,' 'crunch,' 'crisis,' or whatever word we choose, but there is no doubt there is an energy challenge, and it is of global dimension.

The favorable weather in the winter heating season, coupled with the apparent renewal of Arab oil, along with the extreme favorable moisture through the fall and winter throughout the Pacific Northwest, have all been favorable to the recent needs for energy. But each one must be considered as at least a minor miracle -- these welcome but unstable signs of encouragement have led us to relax our energy vigil.

In spite of the promise of the development of new sources of energy, do not expect advancing technologies to solve our short-range energy problems -- and by short-range, I mean up to ten years. The only dependable solution during that time frame is a drastic reduction in our energy requirements.

To support this, I quote remarks made by John Sawhill before the Washington Journalism Center, March 6, 1974.

'A few minutes ago, I said that we got through the winter because of leakage in the oil embargo, because the winter wasn't unusually severe, and because our fuel oil allocations programs worked.

But there's another major reason: the American people really conserved energy. The survey results we get vary according to sampling technique, region surveyed, and questions asked.

But they do indicate that as many as 80 percent of American families did turn their thermostats down and reduce their use of electrical power. And utilities are reporting savings of as high as 15 percent on energy output, after correcting for weather. It was this cooperation by the American people that made the difference.'

Let me sum up the things it would, in my opinion, be irresponsible to depend on for either short- or medium-range solutions.

- (1) The reliability of foreign imports, regardless of the source.
- (2) New fossil fuel discoveries even when accompanied by the Alaskan pipeline and deep water ports.
- (3) Low-sulfur strippable coal for more than a stop-gap answer.
- (4) Technology to miraculously bail us out.
- (5) Nuclear, through either fusion or fission, except as a possibility in the long range.

The only certainty as I see it for both the long and short haul is an all out and continuing effort to make conservation of all energy sources a way of life.

Montana citizens have done much and will continue to do more toward that goal, but its achievement will need 100% cooperation and participation.

I, therefore, urge that each of you become totally conservation conscious; that each of you adopt an energy ethic of thrift rather than spendthrift; and that you continue to take those myriad of small steps to save energy which are available to you in your daily lives.

Through conservation reaffirmation, we have a real opportunity before us to learn to stand on our own resources, and move forward under our own power."

Middle Distillate Program

Requests for allocable fuel rose during March. A total of 220 requests were received, up from 173 in February (an increase of 27%). A total of 399,400 gallons of middle distillate fuel were allocated in March, a 25% increase over the February total of 320,220 gallons. Of the fuels allocated, 234,860 gallons were gasoline, 59% of the total. No propane or residual oils were allocated, according to the Fuel Allocations Office. Wholesale and retail dealers accounted for 57.9% of total allocated fuels, and 72% of allocated gasoline supplies. The agricultural sector

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received 9.3% of allocated fuels, up considerably from the allocation of 3% of total fuels in February. Allocation fractions of major petroleum suppliers for Montana range from 100% for the Husky Oil Company to Union Oil's 60% to 64% (home heating oil and gasoline, respectively).

Responses to our Energy Status Survey indicate few instances of fuel shortage, though some respondents are dissatisfied with the efficiency of the federal fuel allocation-distribution system. Several sources indicate that they anticipate future difficulties in meeting the demands of the agricultural consumption sector later in the year. Several respondents urged this office to continue to promote the energy conservation effort. Finally, the Montana Department of Agriculture has reported that fuel supplies are "adequate to tight."

According to Oil and Gas Conservation Division sources, the shortage of well casing has been compounded by difficulties in obtaining fittings and other materials necessary for exploration and development activities.

State of Montana
Office of The Lieutenant Governor
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MAY 8 1974

BILL CHRISTIANSEN
LIEUTENANT GOVERNOR

May 3, 1974

MONTANA ENERGY STATUS REPORT

Of the seven responses to our Energy Status Report survey, only one source indicated any concern that a curtailment of energy supplies would occur in the near future. Information relayed by the Department of Agriculture indicates that gasoline and diesel supplies are adequate. Apparently, those counties reporting supplies as tight are only indicating that the bulk supplier is unable to fill all producer tanks all the time. Predictions are being made that lubricating oils and greases will be in short supply in the near future. Tractor tires also are reported in short supply; petroleum products are used in tire manufacture.

Middle Distillate Program

Requests for allocable fuels dropped considerably during the Month of April. Requests totalled 137 in April compared to 220 in March. Although the number of requests was down, some 670,270 gallons of middle distillate fuels were allocated in April, up 68% from the March total of 399,400 gallons. Of the fuels allocated, 334,500 gallons were gasoline, some 49.9% of the total. The remaining fuels allocated were 334,700 gallons of diesel and 1,070 gallons of heating oil. No requests for propane or residual fuels were received. Wholesale and retail dealers accounted for 71% of total fuels allocated and 84% of total allocated gasoline supplies. The agricultural sector accounted for only 4% of total allocated fuels. Of the total middle distillate fuels set aside for emergency allocation during the Month of April, only 29% required allocation.

Manley O. Mortensen has been appointed Conservation Officer for the Montana Fuel Allocations Office. Among other responsibilities, Mr. Mortensen will:

1. Obtain information concerning methods of conservation and the imparting of that information to whomever requests it. These methods shall consist of signs, stickers, brochures, and general information that the public must have for the appropriate conservation program needed.

2. Tie the Montana State Fuel Allocation Officers' Conservation Program in with the Lieutenant Governor's Office through the Assistant Fuel Allocation Officer and the State Fuel Allocation Officer.

3. Obtain conservation information through government conservation sources, gas consumption figures of state vehicles, and other sources as appropriate to the thoughts or needs of the Conservation Officer.

4. Become familiar with the main highways within the State of Montana, and in general terms, the fuel availability along these routes. This information will be utilized for broadcast to the general public during tourist seasons and other times of need.

5. Prepare general monthly reports concerning the availability of product for farmers, trucking, construction, and general industry. These reports will be coordinated through the Assistant Fuel Allocation Officer and the State Fuel Allocation Officer to the Lieutenant Governor's Office.

Conservation Comments

As noted last month, we are concerned that consumers will return to the energy consumption habits that are partially responsible for the nation's energy crisis last year and early this year. For this reason, we present the following items as food for thought.

1. Studies have indicated that the use of 60 million tons of coal per year in steam generation would replace the 600,000 barrels of oil per day, our most critically short energy source. However, a 7% reduction in our transportation energy requirements would accomplish the same end. Considering the potential environmental and social costs of mining 60 million tons of coal per year, conservation efforts appear to be the more favorable alternative.

2. The Environmental Protection Agency studies have shown that the average gas consumption level of private vehicles is 13.5 miles per gallon. If this figure could be raised to 17.0 miles per gallon, about 1.6 million barrels of gas per day could be saved. During the Arab oil embargo, the flow of an average 2.7 - 3.0 million barrels of oil and refined products were interrupted each day. A small increase in energy efficiency in private vehicles could accomplish a savings of over one-half the amount of petroleum products withheld during the embargo. Similarly, if vehicle owners organized car pools, additional savings could result.

3. The per capita consumption of all forms of energy by residents of New York City is only 45% the national level of per capita energy consumption. This lower level of energy consumption has been attributed to the ready availability of mass transit facilities in New York City. While we realize that similar mass transit facilities are not feasible in Montana, we have included this information to illustrate the effects of greater energy efficiency in transportation. An immediate benefit of increased efficiency in the transportation sector is greater availability of petroleum products to the vital agricultural sector.

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STATE DOCUMENTS

JUN 5 1974

BILL CHRISTIANSEN
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June 4, 1974

MONTANA ENERGY STATUS REPORT

As was the case last month, only one of the seven who responded to our Energy Status Survey indicated any concern that a curtailment of energy supplies would occur in the near future.

Middle Distillate Program

Total requests for allocable fuels numbered only 76 during the month of May, down considerably from the April total of 137 requests. As in April, the total allocated gallonage was high despite the decrease in number of requests. A total of 597,845 gallons of fuels were allocated in May compared to the 670,270 gallon allocation in April. Of the total fuels allocated, 362,220 gallons (60.4% of the total) were gasoline, and 236,625 gallons were diesel (39.6% of total fuels). No other fuels were allocated, nor were any requests received. Of the allocable fuel "set-aside" totals, only 31.5% of the gasoline total and 22% of the diesel total were used. Wholesale and retail fuel distributors again accounted for the bulk of allocations, receiving almost 56% of the fuels allocated. Despite the intensive seasonal utilization of petroleum products, agricultural requests amounted to only 3.6% of the total allocated fuels.

Conservation Comments

Judging from the increased number of vehicles driving at speeds in excess of 55 mph, and the number of cars occupied by only one person, the public evidently believes the energy crisis is over. As we have mentioned earlier, publicity and statements by some national leaders has fostered such a belief. Nonetheless, the price of petroleum products has not dropped and, in fact, continues to rise. "New oil" produced in the United States is now selling at \$10 a barrel, compared to a price of \$11.50 to \$11.75 per barrel for imported oil. Since home-based oil production cannot increase drastically in the immediate future (due to materials shortages and very legitimate environmental restrictions), increased consumption of petroleum products must be supported by increased use of the higher priced imported oil.

For the benefit of those who wish to continue conservation efforts, the following material from the Citizen Action Guide Energy Conservation (published by the Citizen's Advisory Committee on Environmental Quality, 1973) is presented.

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"Bicycles are 28 times as energy efficient as cars, walking 17 times, buses almost 4 times, and railroads 2.5 times. Only airplanes are less energy efficient than automobiles." (The report refers to large commercial aircraft - ed.)

". . . 54 percent of all car trips in this country are less than five miles . . . Interestingly enough, traveling on family business - going to the doctor or dentist or going shopping - accounts for 31.4 percent of all passenger car trips and averages 5.5 miles one way." According to the Council report, if each family took one less trip a week, by planning ahead to combine errands and appointments, an average family would save \$74 a year. While the money saving does not seem impressive, if each American family did this the nation would save:

. "38 billion miles of driving

. 2.9 billion gallons of gasoline. That is enough fuel for 13 million one-way car trips per year from New York to San Francisco - a distance of 3025 miles

. 1.1 billion dollars."

Figures released by Montana's Attorney General indicate that observance of the 55 mph speed limit is saving lives as well as gasoline in Montana. At this time last year, some 110 lives had been lost on Montana highways. This year, our highway deaths number 77, a 30% reduction from last year's total. In comparing the period March 3 to June 4, 1973 to the same period this year, an almost 41% reduction in lives lost is noted.

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July 3, 1974

MONTANA ENERGY STATUS REPORT

Of the seven Monthly Energy Status Report Forms returned to the Lieutenant Governor's Office, none indicated a shortage of energy-fuel or a curtailment of energy supplies in the near future.

Middle Distillate Program

Requests for allocable fuel for June totaled 102. This was 26 more than were received during the previous month. Total allocated gallonage was high as in the previous months. Fuels allocated in June were 916,650 gallons compared to 596,845 for May, and shows an increase of 318,805 gallons. Of the total fuels allocated, 697,880 gallons (76.1 % of the total) were gasoline, and 218,770 gallons were diesel (23.9% of total fuels). Total set aside for all fuels remaining unassigned at the end of the month of June was 1,608,796 gallons.

Conservation Comments

A recent news release from the Federal Energy Office stated: "Improving auto fuel economy is the most powerful approach to reducing transportation energy growth." It was further stated that automobile gasoline consumption today represents about one-third of the nation's domestic petroleum use, equivalent to 6.7 million barrels per day.

Conservation efforts must be continued and the following material from the Citizen Action Guide to Energy Conservation (published by the Citizen's Advisory Committee on Environmental Quality, 1973) is presented.

Tips to Increase Transportation Efficiency

- Don't always rely on the automobile. Walk, take a bus, ride a bicycle when you can. Vacation trips do not have to revolve around the car. Consider other ways of traveling.
- Plan to use public transportation. Check the schedules and routings -- call your local company if the current routes do not meet your needs. Make the building of better public transportation systems a priority in your community.
- Try to make one less car trip a week. Plan your shopping and medical appointments together, if possible. Consciously think: "Do I have to use the car for this trip?"

- Organize car pools. It might be at least as convenient to travel with others to work, school or shopping.

Tips to Increase Summer Cooling Efficiency

Businesses

- Turn off cooling systems not actually needed for people or essential processes such as entrances to buildings, halls, storerooms and other such spaces which people use either infrequently or for only short periods.
- Turn off cooling systems at all times when spaces are unoccupied.
- Turn off cooling systems in parts of buildings not in use. Could reduce energy usage 5 to 10 percent.
- Raise thermostat and humidistat settings. Recent studies show that, with suitable clothing, temperatures approaching 80 degrees F and humidities approaching 60 percent relative humidity may be acceptable. This procedure could reduce energy demands 15 percent.
- Reduce cooling loads by turning off or reducing to the lowest acceptable level all lights and heat-releasing appliances. Encourage use of high-efficiency lighting at point of actual work and minimize excessive general lighting.
- Minimize use of major heat producing devices (appliances) during periods of peak load operation of cooling system.

Homes

- Turn off furnace pilots during the cooling season when practical.
- Keep the home a sealed unit during use of airconditioning unit. The recycling of cool inside air allows your home unit to function more efficiently. Same is true of your automobile during its use during the summer months.
- Minimize the solar effect. Keep shades, curtains and drapes closed during the day.
- Utilize outdoor air for cooling whenever possible. Most of our evenings in Montana are quite cool . . . put nature to work.
- Maintain your cooling system and components in clean condition and in good working order.

If we are to become independent of all sources of foreign energy, then we must continue conservation of all energy. CONSERVE!

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STATE DOCUMENTS

State of Montana
Office of The Lieutenant Governor
Helena 59601

AUG 7 1974

BILL CHRISTIANSEN
LIEUTENANT GOVERNOR

August 5, 1974

MONTANA ENERGY STATUS REPORT

Of the ten Monthly Energy Status Report Survey Forms returned to the Lieutenant Governor's Office, none indicated a shortage of energy-fuel or a curtailment of energy supplies in the near future.

Middle Distillate Program

Requests for allocable fuel for July totaled 150 as compared to 102 for the month of June. This is an increase of 68% or 48 more requests than the previous month.

Fuels allocated for July were 1,388,260 gallons compared to 916,650 gallons for June, an increase of 471,610 gallons. Of the total fuels allocated, 1,127,260 gallons (81.2% of the total) were gasoline, and 261,000 gallons were diesel (18.8% of total fuels). Total set aside for all fuels remaining unassigned at the end of the month of July was 1,567,394 gallons. A break down of these set aside fuels for the month of August are as follows:

Propane.	78,782
Motor Gasoline	770,276
Kerosene	3,864
Home Heating Oil	12,994
Diesel	545,070
Other Middle Distillate Fuels.	28,518
Fuel Oil #4 (non-utility).	21,672
Fuel Oil #5 & #6 (non-utility)	92,778
Other Residuals.	13,440
Grand Total	<u>1,567,394</u>

The combined total for set aside motor gasoline and diesel fuels for the month of August is 1,315,346 gallons. Although this is an impressive figure we must consider the gallonage this represents for each of the 468,299 registered vehicles in Montana. Of the total registered vehicles 273,180 are passenger cars, 167,033 are trucks, 23,673 are motorcycles and 4,413 are state exempt vehicles. This total does not include those unlicensed vehicles such as combines, tractors, and other off-the-road vehicles requiring gasoline or diesel fuel to operate.

If we divide the number of registered vehicles (468,299) into the set aside motor gasoline and diesel fuel (1,315,346 gallons) our total gallonage per unit would be only 2.7 gallons. This average for each vehicle would have been further reduced had we taken into account all the off-the-road vehicles.

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Conservation Comments

The Fall and Winter months are fast approaching and now would be an ideal time to begin giving some thought and action to winterizing your home for the conservation of energy. The following energy conservation tips are from the National Bureau of Standards and taken from their manual, NBS Technical Note 789.

Storm doors and windows or clear plastic film should be given definite consideration for those homes presently not using these as a buffer zone against cold air leakage. All openings, from indoors to the outdoors, should be sealed tightly. Weather stripping would help to assure this. Warm air leaking from a building is replaced by cold air which must be again heated. For many homes, about 35% of the total heating energy is used to warm the cold air which enters because of leakage.

Leakage occurs because cracks around windows and doors, attic stairway doors, fireplace dampers open when not in use, electric light ceiling fixtures, gaps around plumbing vents or pipes, air ducts penetrating ceilings or walls, and other such openings allow outside cold air to enter the house.

One example of a leakage problem could be a 1/4 inch crack 3 feet wide under an attic door. Cold air leaking under this door would create a \$5.00 waste of energy this winter. By placing a scrap piece of carpeting, heavy rag, or towel against this crack you will prevent the cold air entering from the attic. To this attic crack add the possible energy waste of 10 to 15 windows, 2 or more outside doors, and several other leakage areas and it could be reasonably assumed your energy waste cost could total as high as \$100 to \$200 during the winter months.

Our present and apparently continuing inflationary period would seem to make this an ideal time to conserve all energy sources.

State of Montana
Office of The Lieutenant Governor
Helena 59601

SEP 6 1974

BILL CHRISTIANSEN
LIEUTENANT GOVERNOR

September 4, 1974

MONTANA ENERGY STATUS REPORT

Past editions of the Energy Status Report have indicated that the energy crisis is still with us, despite publicity to the contrary. We also have suggested that our energy consumption habits must be altered if we are to avoid severe future energy problems. The following quotes from the Weekly Energy Report (Vol. 2, No. 34 -- August 26, 1974) are offered in support of our position. The Weekly Energy Report is published in Washington, D.C.

"There are growing indications that this winter may find the United States in a more grave shortage of energy than that caused by the Arab oil embargo last winter."

Excluding any changes in the supply of imported energy, the Weekly Energy Report lists the following domestic factors as posing a severe threat:

- "(1) An anticipated coal miners' strike when present contracts expire Nov. 12;
- (2) A strike by the Oil, Chemical and Atomic Workers when their contracts expire Jan. 7;
- (3) Heavy curtailments of natural gas; and
- (4) Low utility inventories brought on by a shortage of money."

The report indicates that any combination of these factors could result in a national emergency, adding that the Oil, Chemical and Atomic workers "have a deep psychological commitment to a strike."

Discussing natural gas, the Weekly Energy Report cites Sen. Ernest Hollings (D.- S.C.), stating:

"Seventeen of the 42 largest natural gas suppliers in the U.S. will be reducing their deliveries to their customers this winter -- some by as much as 41 percent of the amount that they were previously selling."

In this context, Hollings said:

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"In the areas served by these pipelines, there will be factories and businesses which will be forced to close. There will be substantial unemployment. Air quality may plummet as desperate gas consumers seek to convert to dirtier fuels."

Hollings was reported to have indicated that natural gas supplies will be 80 percent worse this winter than last and that on an annual basis, total natural gas supplies will be 55 percent lower than last year's.

Now for the good news . . .

The Federal Energy Administration (FEA) has stated that the supply of petroleum products will be adequate through the second quarter of 1975, assuming that the nation can continue to import crude oil at a rate of 3.5 million barrels per day.

The FEA adds that preliminary estimates indicate:

"No significant shortages of natural gas liquids or unfinished oils are expected to occur from July 1974 through the second quarter of 1975.

Inventories of motor gasoline will increase approximately by 20 percent through June 1975, which should place the country in a favorable supply situation for next summer.

Middle distillates will be in adequate supply this winter, but limited measures may be necessary to ensure distribution of adequate amounts of distillate to the Eastern States, especially the Northeast.

For residual fuel, we expect no shortfall for the first quarter of 1975 at constant May prices, and no shortfall during the second quarter of 1975.

Approximately a one percent shortfall of naphtha jet fuel can be expected late this year, but by the first quarter of 1975 supplies should again be ample at current prices.

No shortfall is expected for kerosene jet fuel, aviation gasoline or petrochemical feedstocks.

Butane should be in ample supply.

Estimates are still being formulated for propane, but indications are that barring extremely low production levels, supply will be adequate this winter and next spring."

Middle Distillate Program

Requests for allocable fuel for August totaled 103 as compared to 150 for the month of July. This represents a decrease of 68 percent or 47 less requests than the previous month.

Fuels allocated for August were 1,382,324 gallons compared to 1,388,260 gallons for July, a decrease of 5,934 gallons. Of the total fuels allocated, 1,124,524 gallons (69.5 percent of the total) were gasoline, and 257,800 gallons were diesel (25.8 percent of total fuels).

The total set-aside remaining at the end of August was 1,578,360 gallons. This figure represents all remaining fuels such as gasoline, fuel oil, diesel, propane, etc. As before, the remaining set-aside is returned to the region for redistribution.

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BILL CHRISTIANSEN
LIEUTENANT GOVERNOR

October 9, 1974

MONTANA ENERGY STATUS REPORT

With the winter months soon to come, the next several issues of the Energy Status Report will devote a portion of each issue to the conservation of energy within the home.

Home Heating

According to the Bonneville Power Administration's Energy Information Bulletin dated September 1, 1974, an uninsulated home will lose over twice as much heat as ones properly insulated. Their calculations reveal the following savings in fuel:

<u>Insulation</u>	<u>Fuel Savings</u>
6 inches in the ceiling	32%
3-1/2 inches in the exterior walls	11%
2 inches under the floor	7.8%
Installation of storm windows	13.6%
	64.4%

Other conservation tips for the fall and winter months ahead deal with cold air leakage in homes and care of heating plants.

Cold drafts coming from a window or door can indicate air leakage in and out of the framing of the home. To reduce heat cost up to as much as 30 percent, install weather stripping at movable joints and caulk around leaking window frames.

Several steps can be taken to assure maximum operating efficiency of heating plants and to minimize the fuel input rate to your burner.

(1) Clean heat exchange surfaces in your furnace regularly. Dust and products of combustion can deposit on surfaces and interfere with good heat transfer.

(2) Have the air adjustment checked periodically by a service professional. With insufficient air, the fuel will not burn completely. With too much air, heat will be lost up the chimney.

(3) Clean or replace air filters when they become loaded with dust or lint. Filters should be checked about once a month.

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(4) Have your entire heating plant cleaned and adjusted by an expert once a year. Inefficiencies in your heating system can increase fuel consumption by as much as 10 percent.

Domestic Hot Water

The July 1973 issue of the National Bureau of Standards Technical Note 789 states that the present energy used for domestic hot water heating constitutes 4 percent of the total annual energy consumption. Of this percentage, 2.9 percent represents the residential sector and 1.1 percent represents the commercial sector.

By setting the hot water tank thermostat at 120 degrees (F), you will realize a reduction of heat losses from storage tanks and piping of 20 to 45 percent. This, in turn, amounts to a 6 to 12 percent reduction in energy usage.

At the 120 degree setting, reduction of 30 percent was noted in energy input to overall daily hot water usage, where no mixing with cold water is required.

Where possible, it is suggested that cold water and an appropriate detergent be used for laundry purposes.

For systems with long circulating pipelines, such as high-rise and large buildings, the reduction in energy consumption will be even greater.

Middle Distillate Program

Requests throughout Montana for allocable fuels for the Month of September totaled 98 as compared to 103 for the Month of August.

Fuels allocated for September were 891,900 gallons, compared to 1,382,324 gallons for August -- a decrease of 490,424 gallons. Of the total fuels allocated, 608,350 gallons (45% of the total) were gasoline, and 218,260 gallons were diesel (23% of total fuels).

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Nov. 7, 1974

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NOV 26 1974

BILL CHRISTIANSEN
LIEUTENANT GOVERNOR

November 7, 1974

MONTANA ENERGY STATUS REPORTEnergy Predictions

According to the October 19, 1974, issue of Business Week magazine, the natural gas shortage, the most pervasive yet often least visible of the fuel scarcities, has worsened sharply in the past year. Even if this winter brings no recurrence of last year's painful oil embargo, the nation's problems in meeting the demand for heating fuels are far from over. Some industry experts, predicting the most biting delivery cutbacks ever, believe that a severe winter will not only mean massive closing of plants, but also perhaps the first curtailment of natural gas to homes in many parts of the country.

The Federal Power Commission expects the nation's 42 major contracted pipelines to fall short of their contracted deliveries by an average of 11 percent during the winter months. That percentage represents a 60 percent jump over the 1973-74 curtailment figures, and it is probably conservative.

Natural gas cutbacks expected for Louisiana, Texas, and Mississippi will average an alarming 47 percent. Oregon and Washington will average 26.1 percent and Colorado will average a 26.3 percent cutback. Louisiana, which produces 28 percent of the nation's natural gas, faces a projected cutback of nearly 55 percent.

Weather will also be a determining factor in our natural gas supplies. In early October, Hurd C. Willett, a meteorologist at Massachusetts Institute of Technology who specializes in long-range forecasts and who correctly predicted last year's winter weather, revised his forecast for a mild winter this year. He now expects winter weather to be "very severe", though he gives his prediction some doubt. He anticipates severe cold in the Northeast and North Central states and milder weather West of the Great Divide.

The propane situation in Montana is deteriorating due to Canada's National Energy Board's decision to curtail propane shipments into Montana by 22 percent. This office was recently advised that one propane broker has already been informed he will receive a 22 percent curtailment. His allotment is based on last year's total propane received. This particular broker services dealers in 16 Montana counties.

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Our winter was mild last year and propane needs within Montana were met. It is quite possible the same will not hold true for this winter's needs. A long and severe cold spell in Montana would work a hardship on many propane users.

Because of this possibility, the State Fuel Allocation Office has begun a survey of all propane outlets within Montana to acquaint the SFAO with a precise picture of Montana's propane outlook. The survey is to include the effect this may have on businesses, homes and industry end users. The results of this survey will be included in next month's energy report and released to the news media should the results of the survey warrant it.

Home Conservation Tips

As promised in our last energy status report, we will continue with tips to conserve energy within the home.

Once you have made sure that your house is well sealed, and loss of heated air is minimized, other energy conservation steps can further save on heating bills.

The March 1974 issue of the National Bureau of Standard's Dimensions lists several excellent ways to further your attack on high energy costs. A few of these tips have been mentioned previously, but due to their importance in total fuel and electrical savings, we felt they should be mentioned briefly again.

(1) Lower your thermostat: Each degree reduction in the setting of the room thermostat will save about 2 percent of total fuel in cold climates. If you set your thermostat back 10 degrees for an eight-hour period during the night, you may expect to save 10 to 15 percent on your fuel bill.

(2) Maintain an efficient heating plant by cleaning or exchanging the filter.

(3) Drain air or water from steam pipes and radiators.

(4) Use enamel, rather than flat paints on radiators. Enamel is easier to clean and collects less dust.

(5) Dust or vacuum radiator surfaces frequently.

(6) Reflect radiator heat into the room by placing a sheet of aluminum or aluminum foil against the wall behind steam or hot water radiators.

(7) Check door gaskets of your refrigerator-freezer by closing the door on a dollar bill. If you can pull it out easily, the gasket is so loose it will leak the cold air from within. Replacement of the gasket, or readjustment of the latch will save electricity and, consequently, money as well.

(8) Use manual defrost units.

(9) Clean the condenser coils (usually located at rear of the refrigerator).

(10) Open door only when necessary and close immediately. Cold air is heavier than the warmer air surrounding the exterior of your refrigerator-freezer. Because of this the cold air flows out of the interior quite readily when the door is opened -- very similar to water flowing down a slope.

CONSERVATION IS THE ONLY CERTAIN MEANS TO ASSURE ENERGY INDEPENDENCE

The August 1974 issue of the U.S. Department of Labor's Consumer Price Index states that gasoline and motor oil has increased 38.4 percent in cost over the past year. During the same period, fuel oil and coal increased 66.3 percent. Conservation efforts in these energy sectors and others will provide needed savings during this inflationary period, and will also help to fight inflation.

Middle Distillate Program

Requests throughout Montana for allocable fuels for the Month of October totaled 113 as compared to 98 for the Month of September.

Fuels allocated for October were 963,810 gallons, compared to 891,100 gallons for September -- an increase of 72,710 gallons. Of the total fuels allocated, 563,280 gallons (46 percent of the total) were gasoline, and 316,300 gallons were diesel (37 percent of total fuels).

Of the 11 monthly energy report survey forms returned to the Lieutenant Governor's Office, only one indicated a possible deficiency in propane at this time.

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